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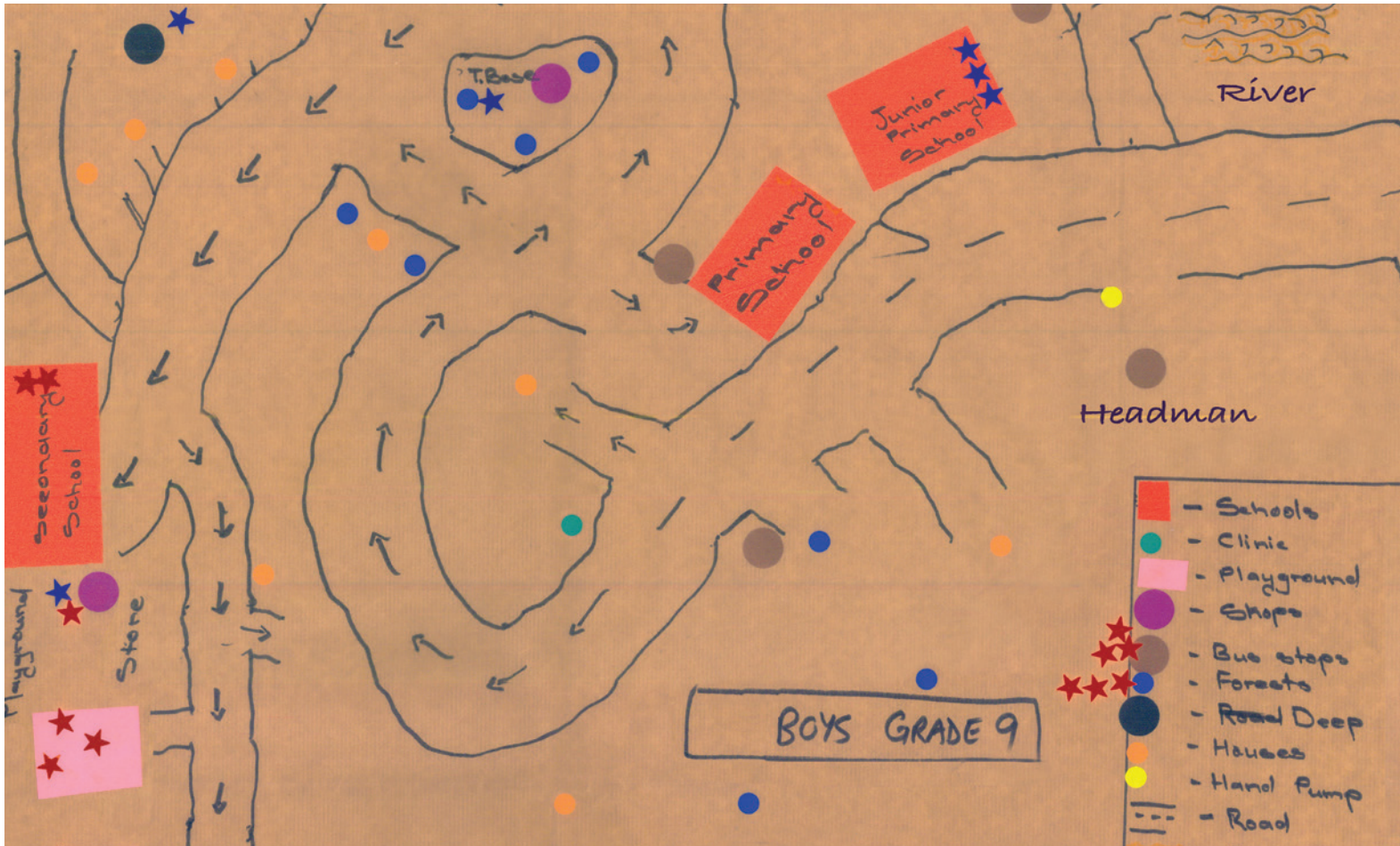
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POPULATION BRIEFS

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Boys and girls in South Africa drew maps of their neighborhoods and indicated how safe they felt in each location. The researchers found that after puberty, girls feel much less safe and begin to restrict their movements. See story, page 2.

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“Anything Can Happen Anytime”: Perceived Lack of Safety among Girls in South Africa

A novel study conducted by the Population Council and partners in South Africa has shown that teenage girls restrict their own movement in public areas substantially more than same-age boys, younger girls, and younger boys. None of the girls of any age rated any place in their community as more than “somewhat safe.” The study, which employed “participatory mapping” among boys and girls in both rural and urban areas, suggests that self-restriction of movement among girls at puberty may result from an increased perception of their risk of experiencing violence or harassment in the community.

Population Council researchers collaborated with the Crime Reduction in Schools Project (CRISP) Trust, the KwaZulu-Natal Department of Education, and the United Nations Children’s Fund (UNICEF) to explore the relationship between the violence adolescents perceive and their use of public spaces by sex, grade, and urban-rural residence. The exercise was conducted in rural and urban areas in South Africa’s KwaZulu-Natal province among girls and boys in grade 5 (who ranged in age from 9 to 13 years) and grades 8–9 (ages 13 to 17 years).

Participants were asked to draw the area that represented the geographic space where they could freely roam. After identifying specific places within those areas—such as clinics, taxi stands, schools, and police stations—participants rated the safety of each place using the following categories: extremely safe, very safe, somewhat safe, sometimes safe/sometimes unsafe, somewhat unsafe, very unsafe, or extremely unsafe.

Analysis of the completed maps showed that urban girls perceived more extreme threats to their safety than did rural girls. Boys in rural areas, however, felt less safe than their urban male peers.

At younger ages, boys’ and girls’ maps of their communities were roughly equivalent in size. But in both rural and urban areas, the areas mapped by older girls were substantially smaller than those mapped by same-age boys, younger girls, and younger boys. The communities mapped by older boys were largest of all groups. For example, the self-defined community of rural grade 8–9 girls was just one-sixth that of rural grade 8–9 boys from the same school (0.90 square miles versus 5.46 square miles).

The study indicated that older girls perceive more dangers in their communities than younger girls and same-age and younger boys, particularly an increased vulnerability to sexual assault. On average, older girls were more likely than younger girls, or boys of the same age, to describe spaces in their area as very unsafe or extremely unsafe. This perceived threat increases the likelihood that girls will choose to or be pressured by their family to withdraw from

criteria. (The researchers facilitated map comparisons by identifying key landmarks on the hand-drawn maps and plotting them on satellite-generated maps.)

Using maps to promote change

Perceptions of danger can be reduced by actually making communities safer and more welcoming, especially to girls. The authors state that mapping exercises of this sort, which clearly show how, where, and at what age girls feel their world is becoming less safe—and, thus, shrinking—could play a role in galvanizing action by politicians and community members.

When presented to local leaders—school administrators, police, and community leaders—the maps raised awareness about spaces deemed unsafe and helped to identify spaces, such as libraries, that could be turned into safe spaces for adolescents. In safe spaces, young people can gather, learn, and build healthy social support networks that they can draw upon in times and places of danger or insecurity.

“Maps often have political clout,” says Population Council researcher Kelly K. Hallman, who led the study. “They are a primary language of policy and politicians.” ■

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their communities. Girls reported, “Anything can happen anytime,” suggesting that they feel hopeless and helpless.

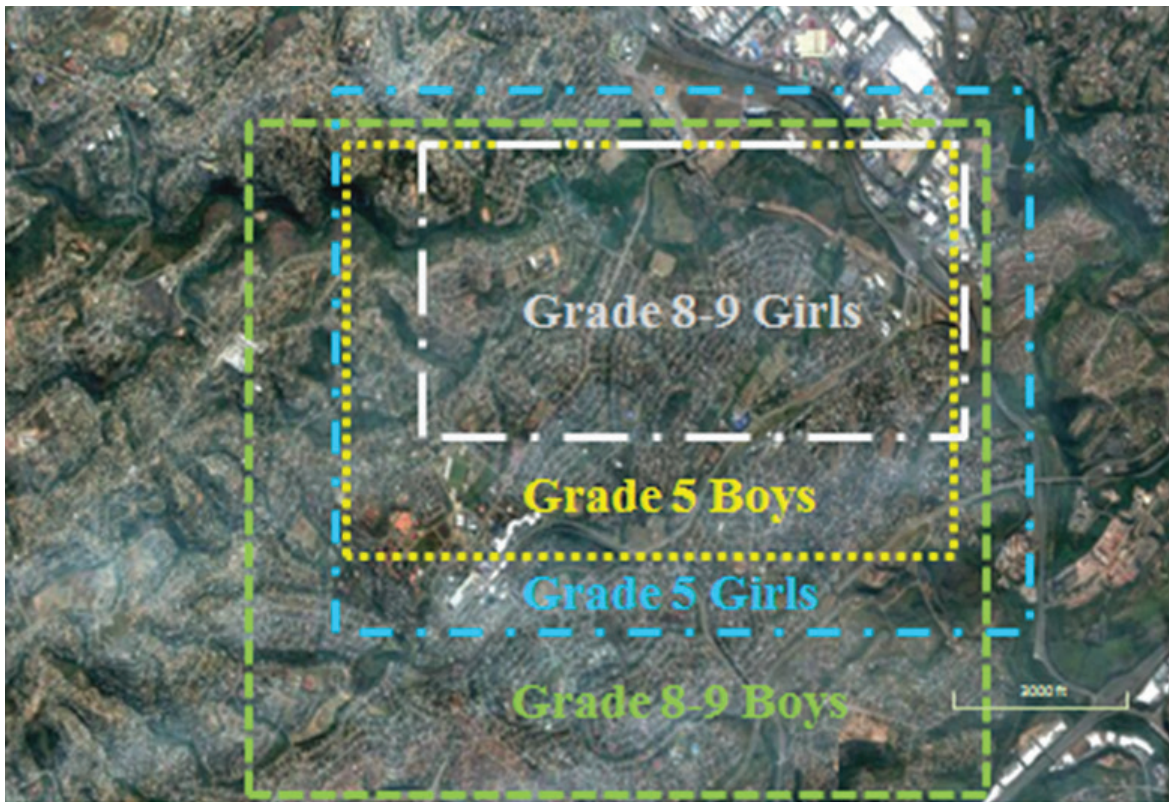
The study’s authors acknowledge some limitations of the participatory mapping method, including difficulty in direct comparisons across maps crafted with few pre-set

SOURCE

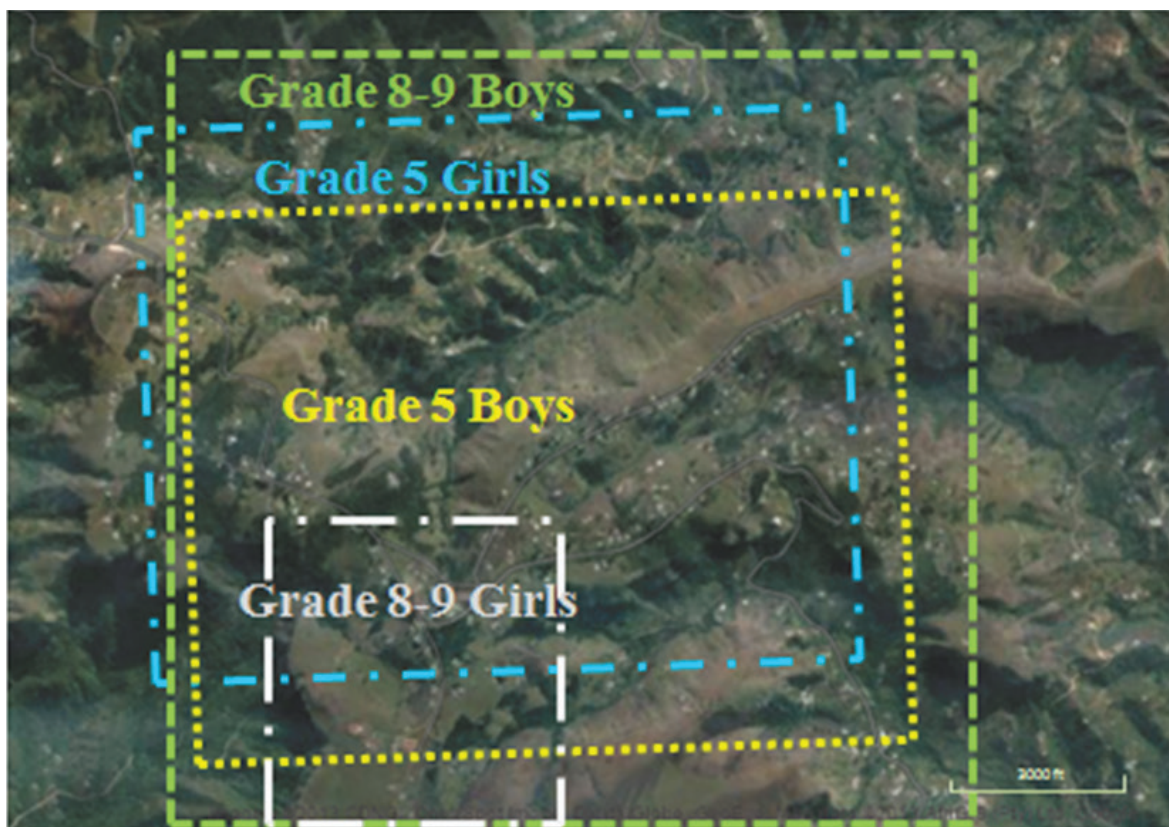
Hallman, Kelly K., Nora J. Kenworthy, Judith Diers, Nick Swan, and Bashi Devnarain. 2013. “The contracting world of girls at puberty: Violence and gender-divergent access to the public sphere among adolescents in South Africa.” *Poverty, Gender, and Youth Working Paper No. 25*. New York: Population Council.

FUNDING

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In both rural and urban (above) areas, the areas mapped by older girls were substantially smaller than those mapped by same-aged boys and younger girls and boys.



The self-defined community of rural grade 8–9 girls was just one-sixth that of rural grade 8–9 boys from the same school.

Expanding Contraceptive Options for Breastfeeding Women: Introduction of the Progesterone Contraceptive Vaginal Ring

For the first several months after childbirth, exclusive breastfeeding is generally an effective method for delaying a subsequent pregnancy. Many postpartum women, however, do not or are not able to breastfeed exclusively. Once a woman begins supplementing her infant's diet, stops breastfeeding, or resumes menstruation, she should use a family planning method if she wishes to space or limit childbearing.

In low-resource settings, breastfeeding postpartum women who wish to delay the next pregnancy often have limited options to access effective contraceptive methods that can be used during this time period. To address this need and expand safe and effective choices, the Population Council and partners developed the progesterone contraceptive vaginal ring (PCVR). It is made of silicone with progesterone dispersed throughout. Women insert this ring into the vagina, where it slowly releases a continuous low dose of the natural hormone progesterone which reinforces the inhibitory effect of breastfeeding on ovulation to prevent pregnancy and delays the return of menstruation. Each PCVR can be used continuously for three months, with additional vaginal rings used in succession for up to one year as long as the woman breastfeeds at least four times a day. The PCVR can be inserted and removed by the woman herself, reducing the need for involvement by skilled health care providers, and fertility returns rapidly after a woman stops using the ring.

Studies in numerous countries have shown that the PCVR is as effective as an intrauterine device (IUD) in preventing pregnancy as long as the woman is breastfeeding at least four times a day. Results have also demonstrated that the PCVR is safe for both mothers and babies and does not affect breast milk production. Currently the PCVR is approved and available in several Latin American countries, but it has the potential to be a useful

option for more than 25 million breastfeeding women living in low-resource settings. A recent commentary by Population Council researchers published in *Contraception* makes the case for introducing the PCVR more widely in these settings and outlines the factors that will need to be addressed to ensure successful introduction of the ring.

Policy considerations

Like all health technologies, the PCVR can only be introduced and made available successfully when there is a supportive policy and regulatory environment. In their analysis, the authors of the *Contraception* commentary recommend:

- educating national health policymakers about the PCVR, so they fully understand the technology, and how this contraceptive can fill a key niche in providing comprehensive family planning services and promoting maternal and child health;
- establishing how the PCVR will be dispensed and by whom (for example, by community health workers or higher-level care providers only);
- considering and identifying potential procurement and financing possibilities; and
- obtaining World Health Organization (WHO) prequalification of the ring manufacturing, a common prerequisite among international procurers, which may support the provision of the PCVR.

Preparing the service environment

To ensure a smooth introduction of the technology once it is approved in various countries, several steps will need to be taken to prepare the service environment, including:

- preparing and training clinic staff and providers about client counseling, PCVR insertion, and the conditions under which the product is effective
- reviewing, evaluating, and modifying service guidelines, protocols, and practices
- providing information about the PCVR to obstetricians and gynecologists, nurses and midwives, pharmacists (including those in the private sector), and potential users

Ensuring user acceptability

Even if the policy and service environments are supportive, women will only use the PCVR if they like it. Confirming acceptability is especially important because the PCVR is a different type of method compared with others commonly used by breastfeeding women, such as injectables and progestin-only pills. In the commentary, the authors cite data indicating that women generally find the PCVR easy to use, comfortable, and well-tolerated. Such data are encouraging and data from ongoing

“The PCVR is as effective as an intrauterine device (IUD) in preventing pregnancy as long as the woman is breastfeeding at least four times a day.”



Once a woman begins supplementing her infant's diet, stops breastfeeding, or resumes menstruation, she should use a family planning method if she wishes to space or limit childbearing.

acceptability studies in India, Kenya, Nigeria, and Senegal will provide more information about women's preferences.

Council studies to facilitate PCVR introduction

Although the PCVR is available to women in seven countries in Latin America, it is not yet approved for use in sub-Saharan Africa or Asia, where it has great potential for meeting the contraceptive needs of breastfeeding women. The Population Council is collaborating with partners in India, Kenya, Nigeria, and Senegal, to obtain regulatory approval and promote product introduction. The Council's goal is to expand access to the PCVR in additional countries where there is a high unmet need for modern contraceptive technologies

for postpartum, breastfeeding women. Council researchers involved in the studies in Africa are:

- assessing interest in and support for the PCVR among policymakers, regulators, and others who determine which products are made available in their countries;
- determining the acceptability of this ring among breastfeeding women, their partners, and providers; and
- identifying and streamlining pathways for introducing the product if approved and understanding the market and product placement opportunities.

The Council is also conducting assessments in each country to determine the most appropriate sectors (public, private,

non-profit, social marketing) in which to make the PCVR available. One of these initiatives is a market segmentation analysis using Demographic and Health Survey (DHS) data to determine the characteristics of women who may want to use the PCVR.

If the PCVR appears to have an appropriate role in the method mix of various countries, the Council will develop an introductory plan to bring the product into these and other low-resource settings, further contributing to the goal of reducing unmet need for contraception. ■

SOURCE

RamaRao, Saumya, Heather Clark, Ruth Merkatz, Heather Sussman, and Régine Sitruk-Ware. 2013. "Progesterone vaginal ring: Introducing a contraceptive to meet the needs of breastfeeding women," *Contraception* 88 (5): 591–598.

Reducing Unmet Need for Contraception: Helping Women to Continue Effective Use

In the developing world, 222 million women would like to delay or avoid pregnancy, but are not using modern contraception. At the 2012 London Summit on Family Planning, the development community committed to reducing this unmet need for modern contraception by reaching 120 million women and girls from 69 of the world's poorest countries with voluntary access to family planning information, contraceptives, and services by 2020, an agreement known as FP2020. In a recent study,

Population Council researchers recommend a promising strategy for reducing unmet need for modern contraception. Rather than focusing solely on reaching women who have never used contraception, the researchers suggested providing better information and services to support women who already use contraceptives, and making it easier for those who previously used contraception to resume use.

Council researchers Anrudh K. Jain, Francis Obare, Saumya RamaRao, and Ian

Askew analyzed Demographic and Health Survey (DHS) data compiled in 34 developing countries between 2005 and 2010. Twenty of these countries were in sub-Saharan Africa.

Drawing from the data, the authors estimated that among the 120 million women whom FP2020 seeks to reach are some 45 million women who once used contraceptives, but discontinued. Additionally, in the coming years, if current levels of contraceptive discontinuation continue, 49 million current contra-



High contraceptive discontinuation could leave up to 94 million women with unmet need for contraception.

“Engaging women who have used a method in the past or are using one now is likely to be the fastest and most cost-effective way to reduce unmet need.”

ceptive users would stop using contraceptives, even though they still wish to avoid pregnancy. Therefore, the researchers estimated that high contraceptive discontinuation in the past and present could leave up to 94 million (45 million + 49 million) women with unmet need. This study is the first to empirically estimate the potential contribution of high contraceptive discontinuation to current and future unmet need.

According to the authors, reducing unmet need could best be achieved in two ways. First, by supporting women and girls who are already using a modern contraceptive method with good information and services so that they can continue with their current method or switch to another modern method that better suits their needs. And second, by helping women and girls who once used, but no longer use, a modern contraceptive method to find and use a method that suits their needs.

“Engaging women who have used a method in the past or are using one now is likely to be the fastest and most cost-effective way to reduce unmet need,” says Jain, “because these women have already

evaluated potential advantages and overcome barriers to contraceptive use—including everything from cultural and social attitudes to out-of-pocket cost—and have made decisions in favor of family planning and adopted a method.”

Strategies to promote sustained and consistent contraceptive use

The authors identified three strategies for reducing contraceptive discontinuation, increasing switching to more effective methods, and increasing uptake by former users. One strategy is to expand the range of contraceptive methods available so that women have more options to choose from; this and other studies have shown that the more contraceptive methods that are available, the less likely a woman is to discontinue contraceptive use. The second strategy is to improve quality of care and provider–client interactions; studies have shown that women are more likely to continue using contraception and less likely to experience unintended pregnancy when they receive higher-quality counseling and care. The third proposed strategy focuses on improving the characteristics of contraceptive technologies available; this approach assumes that women will continue using their preferred method, or decide to return to it, if products are easier to use, well-tolerated, and more affordable.

“Focusing on encouraging past users with unmet need to resume use and supporting current users are essential in reducing unmet need in the future and reaching FP 2020 goals,” says Askew. ■

SOURCE

Jain, Anrudh K., Francis Obare, Saumya RamaRao, and Ian Askew. 2013. “Reducing unmet need by supporting women with met need,” *International Perspectives on Sexual and Reproductive Health* 39(3):133–141. DOI: 10.1363/3913313.

FUNDING

UKaid/DFID

Jain, Obare, RamaRao, and Askew found that in the 34 countries they studied:

37%

of women ***had no need for contraception*** because they wanted to become pregnant or were menopausal;

36%

of women ***wanted to avoid pregnancy and were using a modern method*** at the time of the survey;

27%

of women ***had an unmet need*** because they wanted to avoid pregnancy but were not currently using contraception;

38%

of women with ***current unmet need had used a modern method in the past***, but were not currently using contraception; and

19%

of women who have ***ever used a modern method discontinued its use***, but continue to have an unmet need.

Estimating the Size of Key Populations in Nairobi, Kenya

A team of researchers, including three from the Population Council, have developed estimates of the sizes of three key populations at risk for HIV infection in Nairobi, Kenya: men who have sex with men, female sex workers, and people who inject drugs. These estimates are among the first solid data on the size of these populations in Nairobi, providing practitioners with evidence to inform the development of programs that meet the needs of these vulnerable groups.

HIV disproportionately affects men who have sex with men, female sex workers, and people who inject drugs. All three groups are stigmatized, discriminated against, and face legal, social, and economic barriers to accessing health services. Because of these circumstances, people in these populations often remain hidden and they may not seek the prevention and treatment services they need to safeguard their own health and the health of their sexual and drug-injecting partners.

Dearth of data

Before this study, policymakers and program planners lacked realistic estimates of the size of these groups, and such limitations restricted their ability to understand the scope of the HIV epidemic and allocate scarce resources appropriately. This evidence about the size of marginalized populations will allow policymakers to respond to the HIV epidemic more effectively.

A gold-standard population data source, such as a census, does not exist for men who have sex with men, female sex workers, or people who inject drugs. So the researchers used three other methods to calculate the size of these populations. Because these approaches are not randomized, the data they produce might be biased in one direction or another. Employing multiple approaches reduces the

chance of bias. The approaches were incorporated within a behavioral surveillance study of key populations funded by the U.S. Centers for Disease Control and Prevention (CDC) in Nairobi. The three approaches were:

- the multiplier method, which gathers data on use from various services, projects, and studies and compares them to reported service use in the surveillance survey;
- the “Wisdom of the Crowds” method, which asks respondents from specific groups to estimate how many members of their population exist, resulting in an average or median estimate of the total population size; and
- a literature review to identify published estimates of the size of the three populations in contexts and regions similar to Nairobi.

“We were able to access service data from a number of sources in this study, which in turn provided a range of estimates,” said Scott Geibel, a Council researcher on the study. “We then convened stakeholders to review these data and decide on the most plausible estimate and ranges.”

“These data offer HIV prevention program planners some much-needed precision in key population size estimates.”

The behavioral surveillance study, which took place in 2010–2011, employed respondent-driven sampling (RDS) to recruit participants. RDS allows researchers to gain access to stigmatized populations through their social networks. Respondents referred a limited number of friends or acquaintances (who are also members of the key population) to participate in the study. The study involved 563 men who have sex with men, 593 female sex workers, and 263 people who inject drugs.

The study team validated the resulting estimates with experts from the Kenyan government, investigators, program managers, and advocates in Nairobi to determine whether the estimates seemed reasonable and to establish plausible upper and lower bounds for the size of the populations. Combining the three methods resulted in the most well-supported estimate of the sizes of key populations available. The researchers arrived at the following estimates for the size of the three populations in Nairobi:

- 11,042 men who have sex with men (with low and high ranges of 10,000 and 22,222);
- 29,494 female sex workers (with low and high ranges of 10,000 and 54,467); and
- 6,216 people who inject drugs (with low and high ranges of 5,031 and 10,937)

The authors acknowledged some basic limitations of their study, most of which related to varying definitions of group membership. For example, how often and recently should a man have had sexual relations with another man to be considered a member of the men who have sex with men group? And should a woman be considered a female sex worker if she has sex for money only occasionally, or only if this is her primary source of income?



The study was one of the first to incorporate such a wide range of data sources and research methods within a broader HIV surveillance survey.

Nevertheless, the study was one of the first to incorporate such a wide range of data sources and research methods within a broader HIV surveillance survey. National government agencies, community-based organizations, and donor organizations can use these population size estimates to develop and launch HIV prevention, treatment, and care services. Further refinement of methods and estimates could also be undertaken. For the time being, this study clearly showed that significant numbers of men who have sex with men, female sex workers, and people who inject drugs live in Nairobi. They and their advocates now have evidence to help them campaign for greater resources to meet the health needs of these key populations.

“These data offer HIV prevention program planners some much-needed precision in key population size estimates,” commented Population Council researcher Jerry Okal. ■

SOURCE

Okal, Jerry, Scott Geibel, Nicolas Muraguri, Helgar Musyoki, Waimar Tun, Dita Broz, David Kuria, Andrea Kim, Tom Oluoch, and H. Fisher Raymond. 2013. “Estimates of the size of key populations at risk for HIV infection: men who have sex with men, female sex workers and injecting drug users in Nairobi, Kenya.” *Sexually Transmitted Infections* 89(5): 366–371. doi:10.1136/sextrans-2013-051071

FUNDING

U.S. Agency for International Development (USAID)/U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) and the U.S. Centers for Disease Control and Prevention (CDC)

COLLABORATION

This study was a collaboration among the following organizations:

- Casino STI Clinic
- U.S. Centers for Disease Control and Prevention
- Gay and Lesbian Coalition of Kenya
- Kenya AIDS Vaccine Initiative
- Liverpool Voluntary Counseling and Testing
- Nairobi Outreach Services Trust (NOSET)
- National AIDS and STD Control Programme (Kenya)
- National AIDS Control Council
- Population Council
- San Francisco Department of Public Health
- United Nations Office on Drugs and Crime (UNODC)
- University of California, San Francisco
- University of Manitoba’s Sex Worker Outreach Programme (SWOP)

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Council researchers in Africa are determining the acceptability of the progesterone contraceptive vaginal ring among breastfeeding women, their partners, and providers.

